

NOTES ON ASIAN AND TRANS-PACIFIC **PODOCARPACEAE**, II

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A revisionary study of Asian and Trans-Pacific **Podocarpaceae** taxa has revealed the existence of a number of undescribed species. Additional herbarium specimens studied and extensive field notes were gathered on various taxa from poorly known geographic areas. The exploration and collection of material in poorly explored regions by various collectors has enhanced our understanding of the Asian and Trans-Pacific **Podocarpaceae**.

Particularly of interest in this paper, is of a new prostrate **Falcatifolium** species from New Guinea. Other prostrate **Podocarpaceae** are known from New Caledonia, New Zealand and Chile. De Laubenfels (1969) had early noted the distinctiveness of a tiny leaf form of **Falcatifolium** from the Vogelkop. The lack of general field data on the specimen delayed publishing it as a new species. Now, however it seems evident that this specimen was from a mature markedly distinct prostrate plant. De Laubenfels (1988) had later again referred to the distinctiveness of the Vogelkop collection. Though under **F. papuanum**, he states juvenile leaves are usually larger than adult leaves, thus the uniqueness of this collection.

**Falcatifolium sleumeri** De Laubenfels et Silba, species nova.

**Frutex parvus, decumbens, late expansus, ad 20 cm. altus. Folia parva, falcata, linearia, 6-10 mm. longa et 1.8-2 mm. lata, costis superis prominentibus, apicibus apiculata, marginibus revolutis. Strobili masculi et strobili feminei ignoti.**

Type: **Van Royen & Sleumer 8203a** (Holo-L), Netherlands New Guinea, Vogelkop Peninsula, Nettoti Range, south slope of Mt. Nettoti, on path of Andjai-Wekari R., 1920 m. altitude.

A low, more or less flattened or prostrate shrub to 20 cm. tall or more. Bark scaly, grayish-brown. Branches numerous, erect, spreading widely, creating a flattened crown covering several square meters on the ground. Stems to 0.5 cm. in girth or more. Leaves linear or linear-ovate, falcate, 6-10 mm. long by 1.8-2 mm. wide, midrib raised above; apex apiculate with a short spine 0.2 mm. long; margins slightly revolute; petiole 0.5-0.7 mm. long. Reproductive structures not seen.

**Van Royen & Sleumer 8203a** was collected from a region much outside the range of true **Falcatifolium papuanum** De Laubenfels. **Falcatifolium papuanum** is limited to the eastern part of New Guinea in the central, Morobe and W. Highlands Districts. **Falcatifolium sleumeri** occurs in rather dark mossy forest.

Another interesting collection of *Falcatifolium* from New Guinea is **Havel & Kairo NGF 17343** (L) which has leaves 10-17 mm. long, but in all other characteristics agrees with typical *F. papuanum*. The Havel & Kairo specimen was from a tree 18.3 m. tall and was collected from the slopes of Mt. Kaindi, Morobe District, Papua New Guinea at 2134 m. altitude.

Other conifers collected from Mount Nettoti include *Podocarpus glaucus* Foxw., as **Van Royen & Sleumer 8203** (L,A,BO,K). This specimen was from the south slope of Mount Nettoti, path of Anjai-Wekari, 1920 m., from a tree 10 m. tall and d.b.h. of 25 cm.. (H.O. Sleumer, pers. comm., 5-15-1988).

In reviewing the Venezuelan *Podocarpaceae* De Laubenfels (1982) had named a new species as *Podocarpus buchholzii*. *Podocarpus buchholzii* De Laubenfels differs from *P. tepuiensis* Buchh. et Gray in its erect bud scales not forming a globular ball. Further, reduced leaves often accompany the bud in the former species. A review of recent collections of the Cerro Neblina region has revealed yet another taxon which is distinct in its long and narrow leaves and stalked male pollen cones. This latter feature is quite unique as typical *Podocarpus buchholzii* has sessile pollen cones as other South American *Podocarpus* species have also.

*Podocarpus aracensis* De Laubenfels et Silba, species nova.

Frutex vel arbor 4-6 m. alta. Gemma 4-9 mm. longa, squamis exterioribus lanceolatis, basis 0.5 mm. latis. Folia linearia vel linearia-elliptica, 2.8-8 cm. longa et 4.5-7 mm. lata, costa supra elevata et caniculata, apicibus subacutis. Strobili masculi solitarii, 17-20 mm. longis et 2-2.5 mm. latis, pedunculis 9 mm. longis. Strobili feminei ignoti.

Type: **Rosa & Lira 2317** (Holo-MG), Brazil, Terr. Amazonas, margins of R. Serra Araca.

Paratype: **Prance et al 29121** (MG, NY), Brazil, Terr. Amazonas, plateau of north massif of Serra Araca, along stream margin, 1200 m. altitude, 0°51-57' N. by 63°21-22' W., sterile, probably juvenile.

A shrub or tree 4-6 m. tall, with a trunk 10-20 cm. in diameter or more. Buds erect, scales elongated and 4-9 mm. long by 0.5 mm. wide, free at the apex. Foliage densely arranged. Leaves linear, narrow, 2.8-8 cm. long by 4.5-7 mm. wide, midrib a sunken groove, margins recurved, apex bluntly acute, narrowed at the base to a petiole 2-3 mm. long. Male cone on a scaly peduncle 9 mm. long, bracts to 2 mm. long and acute; pollen cone oblong-cylindric, 17-20 mm. long by 2-2.5 mm. wide, solitary or in small groups. Female cones not seen.

A few odd *Podocarpus* specimens from the Cerro Neblina region of southern Venezuela and northern Brazil may belong to *P. aracensis*, though more male and female specimens need to be

collected. Among these are **Maguire, Pires & Maguire 60529** (MG, NY) from Brazil, Terr. Amazonas, Serra de Neblina, Rio Negro, Rio Cauaburi, 2200 m., in open **Bonnetia** woodland. This specimen has one pollen cone on a scaly peduncle 7 mm. long.

Further, **Maguire, Wurdack & Maguire 42331** (MG, NY,US) from Venezuela, Terr. Amazonas, Cerro de la Neblina, Rio Yatua, northwest head of Canon Grande, at 1200-2200 m. from a shrub 1-3 m. tall, has a female cone on a long peduncle nearly 2 cm. long. The female cone is subtended by two bracts, the larger one 6 mm. long; seed structure globular, 9 mm. long by 7 mm. wide, with a crest.

Both specimens **Maguire et al 60529** and **Maguire et al 42331** are somewhat closer to **Podocarpus buchholzii**, however the bud scales are relatively longer. **Podocarpus aracensis** leaves are long and narrow rather than oval.

Only a small percentage of the poorly explored region of the Cerro Neblina has recently been collected in. A number of interesting collections are listed below.

**Podocarpus buchholzii** De Laubenfels. **M. Nee 30623** (NY), Venezuela, Terr. Amazonas, Cerro de la Neblina, northeast of Pico Phelps, 2100 m., 00°50'00"-12"N. by 65°58'50"W.; **M. Nee 3084** (NY) northeast of Pico Phelps, 2100-2150 m.; **M. Nee 3079** (NY) northeast of Pico Phelps, 1850 m..

**Podocarpus magnifolius** Buchh. et Gray. **Maguire, Pires & Maguire 60513** (MG, NY) Brazil, Terr. Amazonas, Rio Negro, Rio Cauaburi, 2439 m., with bud scales 5-10 mm. long.; **M. Nee 30743** (NY) Venezuela, Terr. Amazonas, Cerro de la Neblina, 5 km. northeast of Pico Phelps, Camp 7, 1900-1950 m., 00°50'30"N. by 65°58'25"W.; **M. Nee 31139** (NY), Venezuela, Cerro de la Neblina, Camp XI, 6.5 km. north-northeast of Pico Phelps, 1300 m., cloud forest, 00°52'N. by 65°58'50"W., a huge foliage form with leaves 27-29 cm. long by 2.7 cm. wide, with foliage clustered at the tips of the branchlets.

**Podocarpus steyermarkii** Buchh. et Gray. **M. Nee 30666**, (NY), Venezuela, Cerro de la Neblina, Camp 7, northeast of Pico Phelps, 1730-1850 m., west facing slopes, cloud forest, 00°50'45"N. by 65°58'10"W., female with a peduncle 18 mm. long.

De Laubenfels (1985) had recently revised the entire genus of **Podocarpus**. An interesting collection from northern Burma needs further material collected, but has unique pollen cone structures. The foliage characteristics otherwise conform rather closely with typical **Podocarpus chinensis** (Roxb.) Wall. ex Forb..

**Podocarpus chinensis** var. **wardii** De Laubenfels et Silba, varietas nova.

**Arbor parva. Gemma 3-5 mm. longis, squamis exterioribus triangularibus. Folia linearia, 5.5-11.7 cm. longa et 3.8-5 mm. lata, costis superis prominentibus, marginibus revolutis, apicibus acutis**

**vel obtusis. Strobili masculi solitarii, 1.4-1.8 cm. longis et 2-2.5 mm. latis; squamis basalis prominentibus, triangularibus, 5 mm. longis et 3-4 mm. latis. Strobili feminei ignoti.**

Type : F. Kingdon-Ward 00521 (Holo-BM, Iso-NY, A), N. Burma, Namai Hka Valley, river-bed near high-water mark, 160 m. altitude.

A small, stout tree. Buds ovoid; scales erect, triangular, 3-5 mm. long. Foliage densely arranged. Leaves linear-oblong, narrow, 5.5-11.7 cm. long by 3.8-5 mm. wide; new growth slightly glaucous below; midrib a distinct raised ridge above, thicker and channeled below; margins revolute, narrowed at the base to a petiole 2.5 mm. long. Male cone with distinctly enlarged round bracts at the base of the pollen cone 5 mm. long by 3-4 mm. wide, apex of bracts bluntly acute or obtusish; pollen cone axillary, solitary, 1.4-1.8 cm. long by 2-2.5 mm. wide or more. Female cones not seen.

**Podocarpus chinensis** var. **wardii** is closely related to **Podocarpus Chinensis** var. **Chinensis**, but differs markedly in the pollen cones having distinctly enlarged basal bracts. In typical **Podocarpus chinensis** var. **chinensis** the pollen cone has much reduced basal bracts.

#### Literature Cited

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